

Title: Proof that some, but not all wildland fires increase surface water supplies

Invited Seminar for First Friday All Climate Talks (FFACTS), USDA Southeast Regional Climate Hub

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Abstract: Wildland fire seasons are longer due to recent droughts, and this trend has resulted in a substantial increase in wildland fire impacts on regional water availability. Fires enhanced annual river flow in parts of the western U.S. and Florida in spite of drought occurrence. However, the magnitude of fire impacts on river flow varied wildly with local climate, extent and severity of wildland fire disturbance and watershed conditions. Contrary to fire impacts reported for headwater catchments, smaller prescribed burns in the southeastern U.S. did not significantly alter river flow further downstream. In this presentation we will discuss regional wildland fire impacts on river flow, and the new insights into the potential role of wildfire and prescribed fire in water supply augmentation under a changing climate.

About Dennis Hallema: Dennis Hallema is a research fellow with the Oak Ridge Institute for Science and Education (USDOE) and is based at the USDA Forest Service Southern Research Station in Raleigh, N.C. He graduated from Montpellier SupAgro/INRA in France on the topic of flooding in the Mediterranean region, and continued his research on hydrological and climate change impacts at INRS and Université Laval in Canada. In 2014, he started his current appointment at the Forest Service.